

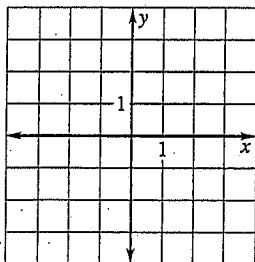
Chapter Test B

For use after Chapter 2

Graph the relation. Then tell whether the relation is a function.

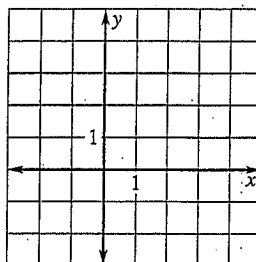
1.

x	-3	-1	0	2	3
y	-2	0	1	2	3



2.

x	3	-3	4	0	3	2
y	3	-2	1	1	4	2



Evaluate the function for the given value of x .

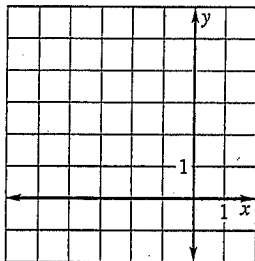
3. $f(x) = 25 - 2x$ when $x = 4$

4. $f(x) = |x - 5|$ when $x = 2$

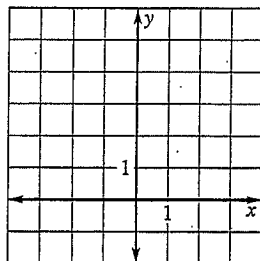
5. $f(x) = x^2 + 5x + 1$ when $x = 1$

Graph the equation.

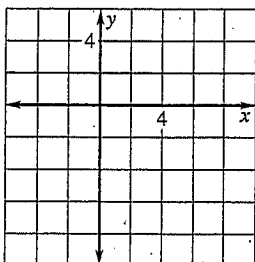
6. $y = \frac{1}{2}x + 3$



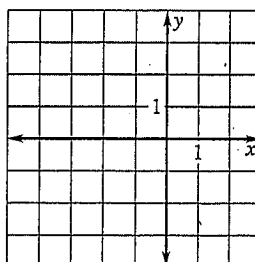
7. $y = 2$



8. $4x - y = 8$



9. $x = -2$



Write an equation of the line that has the given properties.

10. slope: $\frac{1}{2}$,
y-intercept: 2

11. slope: 1
point: $(2, -3)$

12. points:
 $(3, 4), (-1, 0)$

Answers

1. Use grid at left.

2. Use grid at left.

3.

4.

5.

6. Use grid at left.

7. Use grid at left.

8. Use grid at left.

9. Use grid at left.

10.

11.

12.

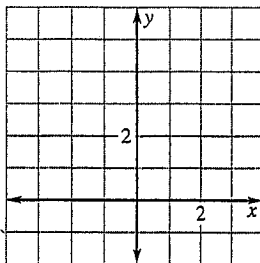
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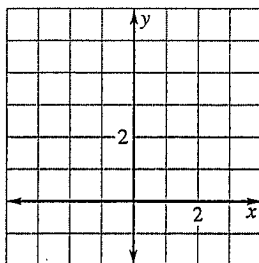
13. Write an equation of the line that passes through $(1, 6)$ and is parallel to the line $x - y = 4$.
14. Write an equation of the line that passes through $(-2, 3)$ and is perpendicular to the line $y = 2x + 1$.

Graph the inequality in a coordinate plane.

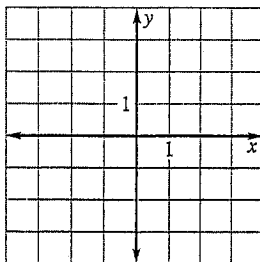
15. $y \geq 1$



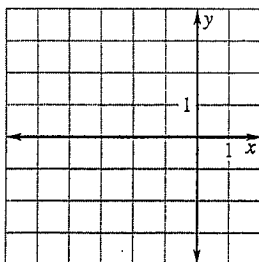
16. $y > 2x + 1$



17. $x - 2y \leq 0$

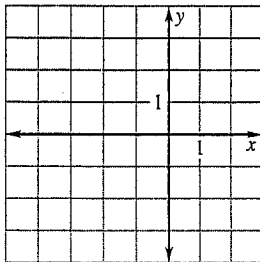


18. $x \geq -2$

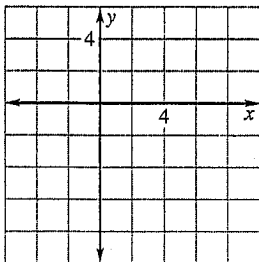


Graph the function.

19. $f(x) = \begin{cases} 1, & \text{if } x > 0 \\ -1, & \text{if } x < 0 \end{cases}$



20. $f(x) = 4|x| - 3$



21. **Profit** The sophomore class needs to raise money. They sell boxes of holiday cards at a profit of \$2 per box. How many boxes must they sell to make a profit of at least \$600? Express your answer as an inequality.
22. **Roofs** A roof rises 3 units for every 4 units of horizontal run.
- (a) What is the slope of the roof?
- (b) If the roof is 15 feet high, how long is it?

13. _____

14. _____

15. Use grid at left.

16. Use grid at left.

17. Use grid at left.

18. Use grid at left.

19. Use grid at left.

20. Use grid at left.

21. _____

22. (a) _____

(b) _____